

# LED ILLUMINATED PARTICLE DETECTION APPARATUS AND METHODS

## ABSTRACT OF THE DISCLOSURE

5 An LED illumination source device for use in a flow particle detector  
such as a flow cytometer includes an LED for providing light at a  
selected wavelength, an optical element having a small focal length for  
collecting nearly all of the light from the LED and substantially  
collimating it to a beam of light, and a focussing optical element for  
focussing the collimated beam at a selected volume within a flow  
sample stream. The LED may be composite LED which generates light  
10 at two wavelengths.

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